

**Notice of Allowability**

Application No.

10/607,887

Examiner

Tuan N. Nguyen

Applicant(s)

RYOU ET AL.

Art Unit

2828

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/18/2005.
2. ☒ The allowed claim(s) is/are 10-14,16 and 17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 11/09/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

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## DETAIL ACTION

### *Response to Amendment*

1. In responding to applicant's amendment filed 10/18/2005, claims 10, 11, 16 have been amended, claims 1-9, 15, 18-20 have been canceled.

## EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below, to the amended claims 10, 11, 16 should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview on November 9, 2005 with Mr. Kevin W. Stinger (Attorney for Applicant, Reg. No. 48,959).

10. **(Currently Amended)** ~~The device of claim 9,~~ A semiconductor laser device comprising:

a first mirror;

an active layer situated on said first mirror;

an oxidizable layer situated on said active layer;

a second mirror situated on said oxidizable layer; and

wherein said oxidizable layer comprises a material with oxygen, and wherein said first mirror has at least one trench from an outside surface of said first mirror into said oxidizable layer.

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11. **(Currently Amended)** A semiconductor laser device comprising:  
a first mirror;  
an active layer situated on said first mirror;  
an oxidizable layer situated on said active layer, the oxidizable layer  
comprising a material with oxygen;  
a second mirror situated on said oxidizable layer; and  
wherein said first mirror has at least one trench from an outside surface of  
said first mirror into said oxidizable layer, and wherein a fluid having oxygen is  
conveyed into the at least one trench to oxidize a first portion of said oxidizable  
layer; and wherein a second portion of said oxidizable layer is an aperture.

16. **(Currently Amended)** A semiconductor laser device comprising:  
a first reflector stack;  
an active region situated on said first reflector stack;  
a second reflector stack situated on said active region; and  
wherein said second reflector stack comprises at least one layer having a  
first portion oxidized with an oxidizing agent having a fluid with oxygen, and  
wherein the first oxidized portion of the at least one layer forms a perimeter  
around an aperture.

**REASON FOR ALLOWANCE**  
***Allowable Subject Matter***

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3. The following is an examiner's statement of reasons for allowance - Applicant's response filed on 10/18/2005 has been considered, with respect to claims 10, 11, and 16, the references of the record fail to teach or suggest:

**Claims 10, 11:**

A semiconductor laser device comprising an active layer on a first mirror, having an oxidizable layer situated on said active layer, and a second mirror on top the oxidizable layer comprising an oxygen material, *wherein the first mirror has at least one trench from an outside surface of said first mirror into said oxidizable layer, and wherein a fluid having oxygen is conveyed into at least one trench to oxidize a first portion of said oxidizable layer, and wherein the second portion of said oxidizable layer is an aperture.*

**Claim 16:**

*Wherein said second reflector stack comprises at least one layer having a first portion oxidized with an oxidizing agent having a fluid with oxygen, and wherein the first oxidized portion at least one layer forms a perimeter around an aperture.*

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Communication Information**

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuan N. Nguyen

